



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,985	06/26/2001	Charles W. Paul	1935.PSA	9653

7590

09/18/2002

Cynthia L. Foulke
National Starch & Chemical Company
P.O. Box 6500
Bridgewater, NJ 08807-0500

EXAMINER

BERMAN, SUSAN W

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 09/18/2002

2

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/891,985

Applicant(s)

PAUL, CHARLES W.

Examiner

Susan W Berman

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Art Unit: 1711

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what is meant by a "rosin derived alcohol" or rosin derived mono-ol. Does applicant intend to set forth an alcohol functional compound incorporating rosin moieties or a product obtained by reacting the rosin with an alcohol or a mono-ol or some other kind of structure? The structure of the "rosin derived alcohol" should be clearly set forth in the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1711

With respect to each of the rejections set forth below, the examiner is interpreting "rosin derived alcohol" to be an ester of rosin obtained by reacting rosin with an alcohol. Also applicant discloses on page 5 of the specification that suitable rosin derived alcohols include hydrogenated rosin.

Claims 1- 6 and 8-10 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 01/29134. WO '134 discloses adhesive compositions comprising an epoxidized block copolymer, a diene-mono-ol polymer, a hydrogenated block copolymer of a vinyl aromatic hydrocarbon and a diene with a tackifying resin and a photoinitiator. See PSA and wt. percents in pages 13-14, photoinitiators on page 15, tackifying resins on page 17 and the Examples. WO '134 teach compositions comprising a saturated block copolymer, an epoxidized block copolymer and a cationic photoinitiator. Additional tackifiers may be added. Example 8 contains an oil.

Claims 1- 6 and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by each of Dillman et al (5,536,772), Erickson (5,382,604 or 5,389,701 or 5,686,535) or Handlin , Jr. et al (5,446,104).

Dillman et al: see the Abstract, column 3, lines 21-31, column 8, lines 10-20, column 8, line 40, to column 9, line 54, column 10, line 61, to column 11, line 14. Dillman et al teach addition of esters of rosins, end block reinforcing resins, such as polystyrene resins, terpene tackifying resins, compounding oils. Dillman et al teach that hydrogenated rosins, esters of rosin and other rosin materials are very compatible with epoxidized diene polymers but that they interfere with radiation crosslinking (column 8, line 56, to column 9, line 2). Dillman et al anticipate the instantly claimed compositions containing a saturated block copolymer and/or a rosin derived alcohol.

Erickson '604 or '701 discloses compositions comprising an epoxidized diolefin block copolymer, cationic photoinitiators such as triarylsulfonium salts, and adhesion promoting or tackifying

Art Unit: 1711

resins and compounding oils. The tackifying resins include diene-olefin copolymers, hydrogenated rosin, esters of rosins, terpenes and arene-block compatible resins. See US '604: column 8, lines 51-63, column 10, line 21, to column 11, line 18. Erickson anticipates the instantly claimed compositions containing a saturated block copolymer and/or a rosin derived alcohol.

Erickson et al '535 discloses compositions comprising a viscous block copolymer, preferably partially hydrogenated and epoxidized and tackifying resins including diene-olefin copolymers, hydrogenated rosin, esters of rosins, terpenes and aromatic resin such as polystyrene. See column 11, lines 24-46, column 12, line 25, to column 13, line 10. Erickson anticipates the instantly claimed compositions containing a rosin derived alcohol.

Handlin, Jr. et al: see column 9, lines 57-68, column 10, lines 48-53, column 10, line 66, to column 11, line 54. Handlin, Jr. et al disclose compositions comprising an epoxidized diolefin block copolymer, cationic photoinitiators such as triarylsulfonium salts, and adhesion promoting or tackifying resins and compounding oils. The tackifying resins include diene-olefin copolymers, aromatic resins, hydrogenated rosin, esters of rosins, terpenes and saturated resins. Handlin, Jr. et al anticipate the instantly claimed compositions containing a rosin derived alcohol. Handlin, Jr. et al do not mention whether the disclosed saturated copolymers are block copolymers.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1711

Claims 1-6 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtsuka et al (5,840,809) in view of Erickson et al '535. Ohtsuka et al disclose epoxidized block copolymers and compositions comprising tackifiers, plasticizers and curing agents useful as adhesives, such as pressure sensitive adhesives and hot melt adhesives. See column 13, line 47, to column 14, line 51, column 17, line 26, to column 18, line 67, column 20, lines 37-42. Although Ohtsuka et al do not mention photoinitiators, the curing agents taught include diazonium, iodonium, bromonium and sulfinium salts of superstrong acids that are known in the art as being functionally effective photoinitiators as well as thermal curing agents.

Erickson et al disclose analogous compositions and teach that the compositions can be cured with ultraviolet radiation in the presence of a photoinitiator such as a triarylsulfonium salt or without the use of radiation by addition of a cationic initiator, such as fluoroborates or strong Bronsted acids (column 11, lines 24-67). It would have been obvious to one skilled in the art to substitute a cationic photoinitiator and ultraviolet radiation, as taught by Erickson et al in analogous art, for the curing agents disclosed by Ohtsuka et al in order to cure the compositions disclosed by Ohtsuka et al. One of ordinary skill in the art at the time of the invention would have been motivated by the teaching of Erickson et al that the compositions comprising an epoxidized block copolymer and tackifiers can be cured by exposure to ultraviolet radiation in the presence of a cationic photoinitiator or without radiation by the addition of a cationic initiator such as fluoroborates or strong Bronsted acids.

Claims 1-6 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiibler et al (5,691,414) or Southwick et al (5,776,998) each in view of Dillman et al (5,536,772) or Erickson (5,382,604 or 5,389,701).

Kiibler et al: see column 1, line 57, to column 2, line 19, column 5, lines 7-42, column 6, lines 15-53, and the examples. Kiibler et al disclose adhesive compositions comprising an epoxidized block

Art Unit: 1711

copolymer and a triarylsulfonium photoinitiator pre-dispersed in a polydiene mono-ol. The tackifiers taught include a diene-olefin copolymer, other tackifying resin and/or aromatic resin such as polystyrene resins. Kiibler et al do not specifically mention a saturated block copolymer or a rosin derived alcohol as tackifier. Southwick et al: see column 1, line 60, to column 2, line 9, column 4, line 62, to column 6, line 31 and the examples. Southwick et al disclose adhesive compositions comprising an epoxidized block copolymer and a triarylsulfonium photoinitiator. The tackifiers taught include a diene-olefin copolymer, other tackifying resin and/or aromatic resin such as polystyrene resins. Southwick et al do not specifically mention a saturated block copolymer or a rosin derived alcohol as tackifier.

The disclosures of Dillman et al and the Erickson references are discussed above. Dillman et al and Erickson each teach that tackifying resins such as esters of rosins can be added to compositions comprising an epoxidized block copolymer and cationic photoinitiators. Erickson teaches that arene-block compatible resins can be added. Dillman et al teach that end block reinforcing resins can be added. It would have been obvious to one skilled in the art to incorporate the esters of rosin tackifying resins taught by Dillman et al or Erickson into the analogous compositions disclosed by Kiibler et al or Southwick et al because Kiibler et al and Southwick et al each teach that other tackifying resins can be added. It would have been obvious to one skilled in the art to add an end block reinforcing resin as taught by Dillman et al or Erickson into the analogous compositions disclosed by Kiibler et al or Southwick et al in order to provide the advantages of a reinforcing resin in the cured psa products.

Allowable Subject Matter

Claim 7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Compositions comprising each of the components set forth in claim 7 in the recited weight percents are not suggested by the prior art cited herein.

Art Unit: 1711

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Udipi et al (4,135,037) disclose adhesive compositions comprising epoxidized rubbery copolymers and rosin-based tackifiers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 703 308 0040. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703 308 2462.

The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9310 for regular communications and 703 872 9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0661.



Susan W Berman

Primary Examiner

Art Unit 1711

SB
September 16, 2002